

Common Core Mathematics  
Vertical Alignment by Cluster for Grades PK-5

	PreK	K	1	2	3	4	5
<b>Number &amp; Operations in Base Ten</b>							
<i>Work with numbers 11-19 to gain foundations for place value.</i>		<b>K.NBT.1</b> Compose & decompose numbers from 11 to 19 into ten ones and some further ones by using objects or drawings & record each composition or decomposition by a drawing or equation understand that these numbers are composed on 10 ones and 1, 2, 3, 4, 5, 6, 7, 8, or 9 ones.					
<i>Extend the counting sequence</i>			<b>1.NBT.1</b> Count to 120, starting at any number less than 120. In this range read, and write numerals & represent a number of objects with a written numeral.				

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<i>Understand place value.</i>			<b>1.NBT.2a/2b/2c</b> Understand that 2 digits of a 2-digit number represent amounts of tens and ones. Understand the special cases outlined on p 27.	<b>2.NBT.1</b> Understand that the 3 digits of a 3-digit number represent amounts of 100s, 10s & 1s (see p 31 for 2 special cases)			<b>5.NBT.1</b> Recognize that in a multi-digit number a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left..
			<b>1.NBT.3</b> Compare two 2-digit numbers based on meanings of 10s & 1s digits, recording the results of comparisons with the symbols $<$ , $=$ , $>$	<b>2.NBT.2</b> Count within 1000, skip-count by 5s, 10s, & 100s.			<b>5.NBT.2</b> Explain patterns in the number of zeros of the product when multiplying a number by powers of 10 & explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole number exponents to denote powers of 10.
				<b>2.NBT.3</b> Read & write numbers to 1000 using base-10 numerals, number names, & expanded form.			<b>5.NBT.3a</b> Read, write & compare decimals to thousandths using base-10 numerals, number names & expanded form (p 45)
				<b>2.NBT.4</b> Compare two 3-digit numbers based on meanings of the 100s, 10s, and 1s digits using $>$ , $=$ , $<$ symbols to record the results of comparisons.			<b>3.NBT.3b</b> Compare decimals to thousandths based on meanings of the digits in each place, using $>$ , $=$ , $<$ symbols to record the results of comparisons.
							<b>5.NBT.4</b> Use place value understandings to round decimals to any place

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<i>Use place value understanding &amp; properties of operations to add &amp; subtract.</i>			<b>1.NBT.4</b> Add within 100 including adding a 2-digit number and a 1-digit number, and adding a 2-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations and/or the relationship between addition & subtraction; relate the strategy to a written model and explain the reasoning used. Understand that in adding 2-digit numbers, one adds 10s and 10s, 1s and 1s, and sometimes it is necessary to compose a 10. (positive or zero difference), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition & subtraction, relate the strategy to a written method & explain the reasoning used.	<b>2.NBT.5</b> Fluently add & subtract within 100 using strategies based on place value, properties of operations and/or the relationship between addition & subtraction.			
			<b>1.NBT.5</b> Given a 2-digit number, mentally find 10 more or 10 less than the number without having to count; explain the reasoning used.	<b>2.NBT.6</b> Add up to four 2-digit numbers using strategies based on place value & properties of operations.			

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<i>Use place value understanding &amp; properties of operations to add &amp; subtract.</i> <b>CONTINUED</b>			<b>1.NBT.6</b> Subtract multiples of 10 in the range of 10-90 from multiples of 10 in the range of 10-90 (positive (positive or zero difference), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition & subtraction, relate the strategy to a written method & explain the reasoning used.	<b>2.NBT.7</b> Add & subtract within 1000 using concrete models or drawings & strategies based on place value, properties of operations, and/or the relationship between addition & subtraction; relate the strategy to a written method. Understand that in adding or subtracting 3-digit numbers, one adds or subtracts hundreds & hundreds, tens & tens, ones & ones; and sometimes it is necessary to compose or decompose tens or hundreds.			
				<b>2.NBT.8</b> Mentally add 10 or 100 to a given number 100-900, & mentally subtract 10 or 100 from a given number 100-900.  <b>2.NBT.9</b> Explain why addition & subtraction strategies work, using place value & the properties of operations.			

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<b>Number &amp; Operations in Base Ten</b>							
<i>Generalize place value understanding for multi-digit whole numbers</i>						<p><b>4.NBT.1</b> Recognize that in a multi-digit whole number, a digit in one place represents 10 times what it represents in the place to its right.</p> <p><b>4.NBT.2</b> Read &amp; write multi-digit whole numbers using base-10 numerals, number names, and expanded form. Compare 2 multi-digit numbers based on meanings of the digits in each place using <math>&lt;</math>, <math>=</math>, <math>&gt;</math> symbols to record the results of comparisons.</p> <p><b>4.NBT.3</b> Use place value understanding to round multi-digit whole numbers to any place.</p>	

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<b>Number &amp; Operations in Base Ten</b>							
<i>Use place value understanding &amp; properties of operations to perform multi-digit arithmetic.</i>					3.NBT.1 Use place value understanding to round whole numbers to the nearest 10 or 100.	4.NBT.4 Fluently add & subtract multi-digit whole numbers using the standard algorithm.	
					3.NBT.2 Fluently add & subtract within 1000 using strategies & algorithms based on place value, properties of operations and/or the relationship between addition & subtraction.	4.NBT.5 Multiply a whole number of up to 4 digits by a 1-digit whole number, & multiply two 2-digit numbers using strategies based on place value & the properties of operations, illustrate & explain the calculations by using equations, rectangular arrays and/or area models.	
					3.NBT.3 Multiply 1-digit whole numbers by multiples of 10 in the range of 10-90 using strategies based on place value & properties of operations.	4.NBT.MA.5a Know multiplication facts and related division facts through 12x12.	
						4.NBT.6 Find whole number quotients and remainders with up to 4-digit dividends and 1-digit divisors, using strategies based on place value, the properties or operations and/or the relationship between multiplication & division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	

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<b>Number &amp; Operations in Base Ten</b>							
<i>Perform operations with multi-digit whole numbers and with decimals to hundredths.</i>							<b>5.NBT.5</b> Fluently multiply multi-digit whole numbers using the standard algorithm.
							<b>5.NBT.6</b> Find whole number quotients of whole numbers with up to 4-digit dividends & 2-digit divisors using strategies based on place value, the properties of operations, and/or the relationship between multiplication & division. Illustrate & explain the calculations by using equations, rectangular arrays, and/or area models.
							<b>5.NBT.7</b> Add, subtract, multiply & divide decimals to hundredths using concrete models or drawings & strategies based on place value, properties of operations and/or the relationship between addition & subtraction; relate the strategy to a written method & explain the reasoning used.